Claims

1. A method for the production of an optical transmission element comprising at least one optical waveguide and comprising a chamber element surrounding the optical waveguide and enclosing an internal space, - in which a filler composition in a foamed state is applied discontinuously to the optical waveguide, - the optical waveguide is subsequently supplied to an extruder, the latter forming a chamber element around the optical waveguide,- in which the filler composition stabilizes within the chamber element formed and, in the final state, forms a plurality of dry compressible filler elements, each surrounding the optical waveguide.

2. The method as claimed in claim 1, wherein foamed polyurethanes or silicones are used as filler composition.

3. The method as claimed in claim 1 or 2, wherein during the stabilization process of the filler composition, the cross section of the chamber element is not altered by the filler composition.

4. The method as claimed in claim 1, the foamed filler composition, upon introduction into the extruder has a diameter that is approximately equal to an internal diameter of the chamber element.

5. The method as claimed in claim 1, wherein the foamed filler composition expands after introduction into the extruder in order to produce a positively locking fit with respect to the chamber element.

6. The method as claimed in claim 5, wherein the foamed filler composition expands by approximately 10 percent of its volume after introduction into the extruder.

7. The method as claimed in claim 1, wherein at least two nozzles are used which apply the foamed filler composition uniformly to the optical waveguide approximately concentrically and in the radial direction of the transmission element.

8. The method as claimed in claim 7, wherein the nozzles are arranged opposite one another and enclose the optical waveguide between them.

9. The method as claimed in claim 7, wherein more than two nozzles are used, which are arranged in star-type fashion in the radial direction of the transmission element and enclose the optical waveguide between them.

10. The method as claimed in claims 7, wherein piezocontrol valves are used as nozzles.

11. An optical transmission element comprising at least one optical waveguide and comprising a chamber element surrounding the optical waveguide and enclosing an internal space, comprising a plurality of dry and compressible filler elements, which are arranged in the internal space and are formed by prefoamed material, the filler elements exerting a defined press-on force against the chamber element and against the optical waveguide in order to fix the same in the longitudinal direction of the transmission element, in which the filler elements in each case surround the optical waveguide, fill existing interspaces in the cross-sectional plane of the transmission element, and make contact with the optical

waveguide and the chamber element in a form-fitting manner.

12. The optical transmission element as claimed in claim 11,wherein the material of the filler elements is formed by prefoamed polyurethanes or by silicones.

13. The optical transmission element as claimed in claim 11, wherein a plurality of separate filler elements are arranged in the longitudinal direction of the optical transmission element with intervening interspaces not occupied by filler elements.

14. The optical transmission element as claimed in claim 11, wherein the filler elements contain an agent that is swellable upon ingress of water, for sealing purposes.

15. The optical transmission element as claimed in claim 11, wherein the filler elements are configured in such a way that they can be easily and completely stripped from the optical waveguides without the use of additional tools.